

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A heat pump apparatus including comprising an evaporator means, a control means in communication with at least one sensor means adapted to measure one or more variables representative of a temperature of an outer surface of said the evaporator means, and a heat exchanger means operable to add heat from a working fluid from a high pressure side of said the heat pump apparatus to said the working fluid entering said the evaporator means, wherein said the control means is operatively connected with said the heat exchanger means to add said the heat when said the control means determines that said the temperature of said the outer surface of said the evaporator means is below a pre-selected temperature, thereby reducing or substantially eliminating the formation of ice on said the outer surface of said the evaporator means.

2. (currently amended) A heat pump apparatus including comprising an evaporator means, a control means in communication with at least one sensor means adapted to measure one or more variables representative of a temperature of an outer surface of said the evaporator means, and a heat exchanger means including comprising a heating element positioned upstream of said the evaporator means and downstream of an expansion means of said the heat pump apparatus, the heat exchanger means operable to add heat to a working fluid entering said the evaporator, wherein said the control means is operatively connected with said the heat exchanger means so that when said the control means determines that said the temperature of said the outer surface of said the evaporator means is below a pre-selected temperature, the heat exchanger means adds heat to said the working fluid thereby reducing or substantially eliminating formation of ice on said the outer surface of said the evaporator means, and wherein said the heat exchanger includes comprises a helically corrugated tube positioned

within an outer housing, and ~~said the~~ working fluid being heated is caused to flow over ~~said the~~ tube and between ~~said the~~ tube and ~~said the~~ outer housing.

3. (currently amended) ~~[[A]] The~~ heat pump apparatus as claimed in claim 1 ~~or claim 2~~ wherein ~~said the~~ at least one sensor means ~~includes comprises~~ a temperature sensor adapted to measure the temperature of ~~said the~~ outer surface of ~~said the~~ evaporator means.

4. (currently amended) ~~[[A]] The~~ heat pump apparatus as claimed in ~~any one of the preceding claims claim 1~~ wherein ~~said the~~ at least one sensor means ~~includes comprises~~ a temperature sensor adapted to measure the temperature of the working fluid exiting the evaporator means.

5. (currently amended) ~~[[A]] The~~ heat pump apparatus as claimed in ~~any one of the preceding claims claim 1~~ wherein ~~the~~ at least one sensor means ~~includes comprises~~ a temperature sensor adapted to measure the temperature of the environment surrounding the evaporator means.

6. (currently amended) ~~[[A]] The~~ heat pump apparatus as claimed in ~~any one of the preceding claims claim 1~~ wherein ~~the~~ at least ~~said one~~ sensor means ~~includes comprises~~ a pressure sensor adapted to measure the pressure of the working fluid exiting the evaporator means.

7. (currently amended) ~~[[A]] The~~ heat pump apparatus as claimed in ~~any one of the preceding claims claim 2~~ wherein ~~said the~~ heat exchanger means ~~includes comprises~~ an electric heating element.

8. (currently amended) ~~[[A]] The~~ heat pump apparatus as claimed in claim 7 ~~when dependent on claim 2~~ wherein ~~said the~~ electric heating element extends through ~~said the~~ helically corrugated tube.

9. (currently amended) ~~[[A]] The~~ heat pump apparatus as claimed in claim 8 wherein ~~said the~~ helically corrugated tube forms part of an electrical circuit of the electric heating element.

10. (currently amended) [[A]] The heat pump apparatus as claimed in ~~any one of the preceding claims and claim 1 further including comprising~~ a compressor and a condenser and where ~~said the~~ heat exchanger means obtains heat from ~~said the~~ working fluid between ~~said the~~ compressor and ~~said the~~ condenser to transfer ~~said the~~ heat to ~~said the~~ working fluid entering ~~said the~~ evaporator means.

11. (currently amended) [[A]] The heat pump apparatus as claimed in ~~any one of the preceding claims claim 2~~ wherein ~~said the~~ pre-selected temperature is between about 4°C and 0°C.

12. (currently amended) [[A]] The heat pump apparatus as claimed in claim 1 wherein ~~said the~~ heat exchanger means ~~includes comprises~~ a helically corrugated tube positioned in an outer housing, ~~said the~~ working fluid from ~~said the~~ high pressure side being caused to flow through ~~said the~~ tube to add heat to ~~said the~~ working fluid caused to flow over ~~said the~~ tube and between ~~said the~~ tube and ~~said the~~ outer housing.

13. (canceled)

14. (currently amended) A method of operating a heat pump having an evaporator downstream of an expansion means, the method ~~including comprising~~ obtaining heat as required from a working fluid on a high pressure side of ~~said the~~ heat pump to transfer to ~~said the~~ working fluid on a low pressure side of ~~said the~~ heat pump, prior to ~~said the~~ working fluid entering ~~said the~~ evaporator to reduce or substantially prevent ice from forming on the outer surface of ~~said the~~ evaporator.

15. (currently amended) [[A]] The method as claimed in claim 14 wherein the method ~~includes comprises~~ measuring one or more variables representative of a temperature of an outer surface of ~~said the~~ evaporator and adding ~~said the~~ heat to the working fluid entering ~~said the~~ evaporator when ~~said the~~ one or more variables indicate that ~~said the~~ temperature has dropped below a pre-selected minimum.

16. (currently amended) [[A]] The method as claimed in ~~claim 14~~ or claim 15 wherein ~~said the~~ method further ~~includes~~ comprises providing a controller to determine when icing of ~~said the~~ evaporator is imminent based on ~~said the~~ measurement of one or more variables.

17. (currently amended) [[A]] The method as claimed in ~~any claims 14 to~~ claim 16 wherein the method ~~includes~~ comprises heating the working fluid entering ~~said the~~ evaporator with an electric heating element.

18. (currently amended) [[A]] The method as claimed in ~~any one of the claims 14 to~~ claim 17 wherein the ~~said~~ high pressure side is between a compressor and a condenser of heat pump.

19. (currently amended) [[A]] The method as claimed in ~~any one of the claims 14 to~~ claim 18 in which ~~said the~~ low pressure side of ~~said the~~ heat pump is provided with a heat exchanger; ~~said the~~ method ~~including~~ comprising providing ~~said the~~ heat exchanger with a helically corrugated tube within an outer housing, ~~said the~~ working fluid being caused to flow over ~~said the~~ tube and between ~~said the~~ outer housing to be heated before it enters ~~said the~~ evaporator.

20. (currently amended) [[A]] The method as claimed in ~~any one of claims 14 to 19~~ claim 14 wherein the method ~~includes~~ comprises adding heat to ~~said the~~ working fluid while ~~said the~~ heat pump is in operation.

21. (canceled)

22. (canceled)

23. (new) The heat pump apparatus as claimed in claim 2 wherein the at least one sensor means comprises a temperature sensor adapted to measure the temperature of the outer surface of the evaporator means.

24. (new) The heat pump apparatus as claimed in claim 2 wherein the at least one sensor means comprises a temperature sensor adapted to measure the temperature of the working fluid exiting the evaporator means.

25. (new) The heat pump apparatus as claimed in claim 2 wherein the at least one sensor means comprises a temperature sensor adapted to measure the temperature of the environment surrounding the evaporator means.

26. (new) The heat pump apparatus as claimed in claim 2 wherein the at least one sensor means comprises a pressure sensor adapted to measure the pressure of the working fluid exiting the evaporator means.

27. (new) The heat pump apparatus as claimed in claim 2 further comprising a compressor and a condenser and where the heat exchanger means obtains heat from the working fluid between the compressor and the condenser to transfer the heat to the working fluid entering the evaporator means.

28. (new) A heat pump apparatus comprising an evaporator, a controller in communication with at least one sensor adapted to measure one or more variables representative of a temperature of an outer surface of the evaporator, and a heat exchanger operable to add heat from a working fluid from a high pressure side of the heat pump apparatus to the working fluid entering the evaporator, wherein the controller is operatively connected with the heat exchanger to add the heat when the controller determines that the temperature of the outer surface of the evaporator is below a pre-selected temperature, thereby reducing or substantially eliminating the formation of ice on the outer surface of the evaporator.

29. (new) A heat pump apparatus comprising an evaporator, a controller in communication with at least one sensor adapted to measure one or more variables representative of a temperature of an outer surface of the evaporator, and a heat exchanger means comprising a heating element positioned upstream of the evaporator and downstream of an expansion valve of the heat pump apparatus, the heat exchanger means operable to add heat to a working fluid entering the evaporator, wherein the controller is operatively connected with the heat exchanger so that when the controller determines that the temperature of the outer surface of the evaporator is below a pre-selected temperature, the heat exchanger adds heat to the working fluid thereby reducing or substantially eliminating formation of ice on the outer

surface of the evaporator, and wherein the heat exchanger comprises a helically corrugated tube positioned within an outer housing, and the working fluid being heated is caused to flow over the tube and between the tube and the outer housing.

30. (new) The heat pump apparatus as claimed in claim 28 wherein the at least one sensor comprises a temperature sensor adapted to measure the temperature of the outer surface of the evaporator .

31. (new) The heat pump apparatus as claimed in claim 28 wherein the at least one sensor comprises a temperature sensor adapted to measure the temperature of the working fluid exiting the evaporator .

32. (new) The heat pump apparatus as claimed in claim 28 wherein the at least one sensor comprises a temperature sensor adapted to measure the temperature of the environment surrounding the evaporator .

33. (new) The heat pump apparatus as claimed in claim 28 wherein the at least one sensor comprises a pressure sensor adapted to measure the pressure of the working fluid exiting the evaporator .

34. (new) The heat pump apparatus as claimed in claim 29 wherein the heat exchanger comprises an electric heating element.

35. (new) The heat pump apparatus as claimed in claim 34 wherein the electric heating element extends through the helically corrugated tube.

36. (new) The heat pump apparatus as claimed in claim 35 wherein the helically corrugated tube forms part of an electrical circuit of the electric heating element.

37. (new) The heat pump apparatus as claimed in claim 28 further comprising a compressor and a condenser and where the heat exchanger obtains heat from the working fluid between the compressor and the condenser to transfer the heat to the working fluid entering the evaporator .

38. (new) The heat pump apparatus as claimed in claim 29 wherein the pre-selected temperature is between about 4°C and 0°C.

39. (new) The heat pump apparatus as claimed in claim 28 wherein the heat exchanger comprises a helically corrugated tube positioned in an outer housing, the working fluid from the high pressure side being caused to flow through the tube to add heat to the working fluid caused to flow over the tube and between the tube and the outer housing.

40. (new) A method of operating a heat pump having an evaporator downstream of an expansion valve, the method comprising obtaining heat as required from a working fluid on a high pressure side of the heat pump to transfer to the working fluid on a low pressure side of the heat pump, prior to the working fluid entering the evaporator to reduce or substantially prevent ice from forming on the outer surface of the evaporator.

41. (new) The method as claimed in claim 40 wherein the method comprises measuring one or more variables representative of a temperature of an outer surface of the evaporator and adding the heat to the working fluid entering the evaporator when the one or more variables indicate that the temperature has dropped below a pre-selected minimum.

42. (new) The method as claimed in claim 41 wherein the method further comprises providing a controller to determine when icing of the evaporator is imminent based on the measurement of one or more variables.

43. (new) The method as claimed in claim 42 wherein the method comprises heating the working fluid entering the evaporator with an electric heating element.

44. (new) The method as claimed in claim 43 wherein the high pressure side is between a compressor and a condenser of heat pump.

45. (new) The method as claimed in claim 44 in which the low pressure side of the heat pump is provided with a heat exchanger; the method comprising providing the heat exchanger with a helically corrugated tube within an outer housing, the working fluid being caused to flow over the tube and between the outer housing to be heated before it enters the evaporator.

46. (new) The method as claimed in claim 40 wherein the method comprises adding heat to the working fluid while the heat pump is in operation.

47. (new) The heat pump apparatus as claimed in claim 29 wherein the at least one sensor comprises a temperature sensor adapted to measure the temperature of the outer surface of the evaporator.

48. (new) The heat pump apparatus as claimed in claim 29 wherein the at least one sensor comprises a temperature sensor adapted to measure the temperature of the working fluid exiting the evaporator.

49. (new) The heat pump apparatus as claimed in claim 29 wherein the at least one sensor comprises a temperature sensor adapted to measure the temperature of the environment surrounding the evaporator.

50. (new) The heat pump apparatus as claimed in claim 29 wherein the at least one sensor comprises a pressure sensor adapted to measure the pressure of the working fluid exiting the evaporator.

51. (new) The heat pump apparatus as claimed in claim 29 further comprising a compressor and a condenser and where the heat exchanger obtains heat from the working fluid between the compressor and the condenser to transfer the heat to the working fluid entering the evaporator.